AMSAT News Service Weekly Bulletins
Issue: ANS-140
Date: 1994-05-21
Sources: amsat-ans-1994-ans-140-weekly.txt

SB SAT @ AMSAT $ANS-140.01
AMSAT-NA COMMENTS TO NTIA

HR AMSAT NEWS SERVICE BULLETIN 140.01 FROM AMSAT HQ
SILVER SPRING, MD MAY 21, 1994
TO ALL RADIO AMATEURS BT
BID: $ANS-140.01

AMSAT-NA Sends Comments To the National Telecomunications & Information Administration (NTIA)

The Radio Amateur Satellite Corporation has responded to proposals contained in a notice from the National Telecommunications and Information Administration (NTIA). That notice, entitled Preliminary Spectrum Reallocation Report, was released in February and was prepared pursuant to Title VI of the Omnibus Budget Reconciliation Act of 1993. In that Act, Congress mandated that the U.S. Government re-allocate to the private sector 200 MHz of spectrum below 5 GHz, 100 MHz of it below 3 GHz. Since Amateur Radio's use of the microwave bands is on a secondary basis to Government applications, mostly military, this proceeding could have a significant impact on our future access to these frequencies.

In its comments filed May 11 by AMSAT-NA VP for Government Liaison Perry Klein (W3PK), AMSAT-NA asked the NTIA for wider amateur and amateur-satellite service bands at 13cm than proposed in its Preliminary Report. It proposed that 2300 to 2310, 2390 to 2400 and 2402 to 2417 MHz be turned over to FCC for allocation to commercial users. In omitting 2400 to 2402 MHz from this re-allocation, NTIA noted amateur satellite use of this band. This would presumably leave 2400 to 2402 and 2417 to 245 MHz available to amateurs. The present 13cm amateur band consists of 2300-2310 and 2390-2450 MHz.

AMSAT-NA proposed a primary amateur/amateur satellite allocation of 2400-2410 MHz plus access to as much of the 2410 to 2450 MHz band as possible on a shared basis. In support of this request, AMSAT-NA cited the likelihood of greatly increased demand for amateur satellite operations in the 13 cm band in coming years, far more than can be accommodated within 2400-2402 MHz; the unsuitability of 2417-2450 MHz for amateur satellite downlinks because of interference from such devices as microwave ovens; and the need to coordinate amateur-satellite allocations internationally so that they are available on a global basis. In addition, AMSAT-NA proposed that a narrow band of 1-2 MHz, somewhere between 2300 and 2400 MHz, be allocated to the amateur service on a primary basis to accommodate the experimental weak-signal tropo and EME work now carried out around 2304 MHz.

AMSAT-NA comments were prepared by a group consisting of Perry Klein (W3PK), Ray Soifer (W2RS), Jan King (W3GEY) and Bill Tynan (W3XO).

[The AMSAT News Service (ANS) would like to thank this group for the material used in this bulletin.]

/EX
SB SAT @ AMSAT $ANS-140.02
LO-19 & IO-26 OBC'S CRASH

HR AMSAT NEWS SERVICE BULLETIN 140.02 FROM AMSAT HQ
SILVER SPRING, MD MAY 21, 1994

TO ALL RADIO AMATEURS BT
BID: $ANS-140.02

LO-19's & IO-26's On-board Computers Crash After A Single Event Upset (SEU)

It has been reported this week that LUSAT-OSCAR-19's On-Board Computer (OBC) had "crashed" after having experienced what is known in the aerospace industry as a Single Event Upset (SEU). This phenomenon is caused by high energy particles in space "effecting" changes in the "state" inside of memory chips and/or other electronic components. In simple terms, an SEU will change a bit from a "1" to a "0" or visa-versa in Random Access Memory (RAM) chips. All MICROSATs have software specifically desgined to handle this problem. However, this software is not "bullet-proof." The software can only correct one "state" change at a time. If two "state" changes occur simultaneously, there is a good possibility that they will occur in RAM memory locations that will eventually lead to an OBC "crash."

The problem with LO-19 was first noticed on 16-MAY-94 over Argentina when LU1JBR was working it then he noticed suddenly that the satellite simply "disappeared." On the evening of 17-MAY-94, LO-19's ground command station, operated by Norberto Pennini (LU8DYF) was able to successfully reset the OBC. AMSAT-LU ground station LU8DYF requests that all users of LO-19 to PLEASE REFRAIN FROM USING IT FOR SEVERAL WEEKS! The reloading of the software will take several weeks along with extensive tests to be performed to insure all is working properly. AMSAT-LU requests that if anyone was collecting telemetry between 17-MAY-94 at 02:00 UTC until 18-MAY-94 around 02:00 UTC that they please forward it to the following addresses: via packet radio to LU8DYF @ LU8DYF.BA.ARG.SOAM and/or LU8DYF @ ON ANY ACTIVE SATELLITE, or via Internet to: lu8dyf@asarin.org.ar. This will certainly assist in the recovery efforts by helping the AMSAT-LU group understand this crash. All users are asked to please be patient as the AMSAT-LU ground command team reloads the operating system software for LO-19.

Alberto Zagni (I2KBD) also reports that the the same high energy eruption that caused the LO-19's OBC to "crash" has also cause IO-26's OBC to "crash." I2KBD reports that the problem occured about the same time period and feels that this was due to the fact the Sun was spewing out alot of highly charged particles. I2KBD says that it will take several days to get the "kernal" and Integrated Housekeeping Tasks (IHT) software reloaded. He too asks that all IO-26 users to please be patient as they bring IO-26 back "on-line."

Please stay tunned to the AMSAT News Service (ANS) bulletins for further status on the reloading and recovery of LO-19 and IO-26.

[The AMSAT News Service (ANS) would like to thank LU2DTZ, LU8DYF, and I2KBD for the information which went into this bulletin item.]

/EX
SB SAT @ AMSAT $ANS-140.03
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 140.03 FROM AMSAT HQ
SILVER SPRING, MD MAY 21, 1994
TO ALL RADIO AMATEURS BT
BID: $ANS-140.03

Weekly OSCAR Status Reports: 21-MAY-94

AO-13: Current Transponder Operating Schedule:
L QST *** AO-13 TRANSPONDER SCHEDULE *** 1994 May 07-Jul 11
Mode-B : MA 0 to MA 170 |
Mode-BS : MA 170 to MA 218 |

```
Mode-S  : MA 218 to MA 220 |<- S beacon only
Mode-S  : MA 220 to MA 230 |<- S transponder; B trsp. is OFF
Mode-BS : MA 230 to MA 250 |        Alon/Alat 230/-5
Mode-B  : MA 250 to MA 256 |
Omnis   : MA 250 to MA 120 |  Move to attitude 180/0, Jul 11
[G3RUH/DB2OS/VK5AGR]

FO-20: The analog mode will be continued indefinitely.
       [Kazu Sakamoto (JJ1WTK) qga02014@niftyserve.or.jp]

KO-25: Please note that the KO-25 uplink was switched back to 145.980 MHz
       on about 10-May-94.  [K6OYY]

AO-16: Working well.  [WH6I]

LO-19: DON'T USE LO-19 UNTIL FURTHER NOTICE!  [LW2DTZ]

IO-26: IO-26 has sustained a SEU and users are asked to refrain from trying
       to use it.  [I2KBD]

KO-23: Operating Normally. [WH6I]

IO-26: Operating normally.  [WH6I]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly
OSCAR status reports.  If you have a favorite OSCAR which you work on a
regular basis and would like to contribute to this bulletin, please send
your observations to WD0HHU at his CompuServe address of 70524,2272, on
INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO
area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM.  Also, if you find that the current
set of orbital elements are not generating the correct AOS/LOS times at
your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL.  The information you
provide will be of value to all OSCAR enthusiasts.

/EX
```